

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A sheet reversing controller comprising:
 - a first conveying path to convey ~~plural~~ a plurality of sheets in a first direction with a specified gap;
 - a reversing portion arranged at the downstream in ~~a~~ conveying the first direction of the first conveying path, the reversing portion comprising a reversing roller capable of normal and reverse rotations to take and reverse the sheets fed from the first conveying path and a pinch roller arranged opposing to the reversing roller;
 - a second conveying path to take and convey the sheets fed in a second direction differing from the first direction of the first conveying path by the reversing portion; and
 - a controller to control ~~the conveyance of the sheets so that a tangential velocity of an outer surface of the reversing roller so that the reversing roller takes the sheets from the first conveying path at a tangential velocity that is the same as a conveying velocity of the first conveying path and supplies the sheets taken therein to the second conveying path at another tangential velocity, in a reverse rotation, that is higher than the conveying velocity of the first conveying path, such that the a conveying gap between the sheets a first sheet and a second adjacent succeeding sheet that are conveyed on the second conveying path becomes equal to the specified gap when conveyed on the first conveying path regardless of lengths of the plural sheets,~~

wherein the controller sets a protruding amount of the sheets protruding between the reversing portion and the second conveying path when the sheets are stopped for reversing the conveying direction of the sheets to a fixed length regardless of the lengths of the sheets.

2. (Cancelled).

3. (Currently Amended) The sheet reversing controller according to claim 1, wherein the controller controls a tangential velocity of the reversing roller when rotating in

the normal direction rotation so as to agree with a conveying velocity of the sheets before the sheets fed from the first conveying path reach the reversing roller in the reversing portion.

4. (Currently Amended) The sheet reversing controller according to claim 1, wherein the controller controls a tangential velocity of the reversing roller when rotating in a reverse direction rotation to feed the sheets in the second direction differing from the conveying first direction of the first conveying path so as to agree with the a conveying velocity of the second conveying path to take and convey the sheets.

5. (Currently Amended) A sheet reversing control method comprising:
conveying plural sheets on a first conveying path in a first direction with a specified gap;

taking and reversing the sheets fed from the first conveying path in a reversing portion arranged at the downstream in a conveying the first direction of the first conveying path comprising a reversing roller that is capable of normal and reverse rotations and a pinch roller arranged opposing to the reversing roller;

taking the sheets in a second direction differing from the first direction after reversing by the reversing portion and conveying on the a second conveying path; and

controlling a conveyance of the sheets so that a tangential velocity of an outer surface of the reversing roller so that the reversing roller takes the sheets from the first conveying path at a tangential velocity that is the same as a conveying velocity of the first conveying path and supplies the sheets taken therein to the second conveying path at another tangential velocity, in the reverse rotation, higher than the conveying velocity of the first conveying path, such that a conveying gap of the sheets conveyed on the second conveying path becomes equal to the specified gap when conveyed on the first conveying path regardless of the lengths of the plural sheets,

wherein the control step controlling includes controlling controls an a protruding amount of the sheet sheets protruding between the reversing portion and the second conveying path when stopping the sheets for reversing its the conveying direction of the sheets to a fixed length.

6. (Cancelled).

7. (Currently Amended) The sheet reversing control method according to claim 5, wherein the ~~control step controls~~ controlling includes controlling a tangential velocity of the reversing roller in the normal rotation to agree with a conveying velocity of the sheets before the sheets ~~fed~~ from the first conveying path reach the reversing roller of the reversing portion.

8. (Currently Amended) The sheet reversing control method according to claim 5, wherein the control step controls a tangential velocity of the reversing roller when rotating in a reverse ~~direction~~ rotation to feed the sheets in the second direction differing from the ~~conveying~~ first direction of the first conveying path so as to agree with the ~~a~~ conveying velocity of the second conveying path to take and convey the sheets.

9. (Currently Amended) The sheet reversing controller according to claim 1, wherein control of the conveyance of the sheets so that the conveying gap between the sheets conveyed on the second conveying path becomes equal to the specified gap when conveyed on the first conveying path regardless of lengths of the plural sheets is done with a single inverter.

10. (Currently Amended) The sheet reversing control method according to claim 5, wherein said controlling includes controlling a conveyance of the sheets so that a conveying gap of the sheets conveyed on the second conveying path becomes equal to the specified gap when conveyed on the first conveying path regardless of the lengths of the plural sheets with a single inverter.

11. (New) The sheet reversing controller according to claim 1, wherein said controller is configured to control the reversing roller to (a) convey the sheets at a velocity higher than a conveying velocity of the second conveying path when rotating the reversing roller in the reverse rotation and (b) feed the sheets to the second conveying path at a velocity that is substantially the same as the conveying velocity of the second conveying path.

12. (New) The sheet reversing control method according to claim 5, wherein said controlling includes controlling the reversing roller to (a) convey the sheets at a velocity higher than a conveying velocity of the second conveying path when rotating the reversing

roller in the reverse rotation and (b) feed the sheets to the second conveying path at a velocity that is substantially the same as the conveying velocity of the second conveying path.